

IN THE CLAIMS:

1. (presently amended) A firearm having a cylinder-indexing mechanism for
~~a firearm~~ comprising:

a frame;

a hammer pivotally movable from a first position engaged with the frame to a
second position disengaged from the frame;

a cylinder rotatably mounted in the frame, the cylinder comprising a plurality of
cartridge-receiving chambers and defining a loading position with respect to the frame for
each chamber; and

a stop pin engageable with the cylinder, the stop pin ~~and cylinder cooperatively~~
~~arranged and configured~~ selectively stopping rotation of the cylinder in a first direction at
each of the chamber loading positions when the hammer is engaged with the frame, the
cylinder further being freely rotatable in a second direction when the hammer is engaged
with the frame. such that the stop pin stoppingly engages the cylinder when the cylinder
is rotated in a first direction, thereby limiting rotation of the cylinder in the first direction

2. (original) The firearm mechanism of claim 1, further comprising a pawl
selectively engageable with the cylinder and moveable from a first position wherein the pawl
engages the cylinder to a second position wherein the pawl does not engage the cylinder.

3. (original) The firearm mechanism of claim 2, further comprising the pawl
contacting the frame to hold the pawl in the second position.

4. (original) The firearm mechanism of claim 3, further comprising the pawl
having a lobe projecting outwardly therefrom which contacts the frame.

5. (original) The firearm mechanism of claim 3, further comprising the a
hammer pivotally mounted to the frame for discharging the revolver, the hammer connected to
the pawl such that moving the hammer alters the position of the pawl, wherein the pawl contacts
the frame when the hammer is in a fully forward position to hold the pawl in the second position.

6. (original) The firearm mechanism of claim 5, wherein moving the hammer rearward from the fully forward position releases contact between the pawl and frame to allow the pawl to engage the cylinder in the first position.

7. (original) The firearm mechanism of claim 6, wherein the pawl is configured to move upwards to release contact between the pawl and frame when the hammer is moved rearward from the fully forward position.

8. (original) The firearm mechanism of claim 2, further comprising a biasing member biasing the pawl towards the cylinder.

9. (original) The firearm mechanism of claim 1, further comprising the frame having a cartridge loading gate cutout, wherein the stop pin stoppingly engages the cylinder in the first rotational direction such that at least one of the cartridge-receiving chambers is aligned with the cartridge loading gate cutout in the frame.

10. (cancelled)

11. (original) The firearm mechanism of claim 1, further comprising a biasing member associated with the stop pin to keep the stop pin biased towards the cylinder.

12. (original) The firearm mechanism of claim 11, wherein the stop pin is slidably moveable with respect to the cylinder.

13. (original) The firearm mechanism of claim 11, further comprising at least a portion of the stop pin and the biasing member being disposed in the frame.

14. (original) The firearm mechanism of claim 1, further comprising the cylinder including a ratchet having a plurality of teeth for engaging the stop pin.

15. (original) The firearm mechanism of claim 14, further comprising the teeth each being configured to stoppingly engage the stop pin in the first direction but not in a the second rotational direction opposite the first direction.

16. (original) The firearm mechanism of claim 1, wherein the frame further comprises a cylinder frame for carrying the cylinder and a grip frame attachable to the cylinder frame.

17. (original) The firearm mechanism of claim 10, wherein when viewed from the perspective of the user the first direction is counter-clockwise and the second direction is clockwise.

18. (original) A firearm having a cylinder indexing mechanism for a firearm,
~~the mechanism comprising:~~

a frame;

a hammer pivotally movable from a first position engaged with the frame to a second position disengaged from the frame;

a cylinder rotatably carried by the frame and having a front, a rear, and a plurality of cartridge-receiving chambers, the cylinder defining a loading position with respect to the frame for each chamber;

~~a supporting structure, the cylinder rotatably carried by the supporting structure;~~

~~a pawl engageable with the cylinder; and~~

~~a cylinder indexing member carried by the frame supporting structure for limiting the rotation of the cylinder, the indexing member and engageable with the rear of the cylinder,~~

wherein with the hammer engaged with the frame, the cylinder is configured to be stoppably engaged by the indexing member in each of the loading positions when the cylinder is rotated in a first direction and the cylinder is freely rotatable without being stoppably engaged by the indexing member when the cylinder is rotated in a second direction opposite the first direction.

19. (original) The firearm mechanism of claim 18, further comprising the cylinder having a ratchet comprising a plurality of undulating surfaces for engaging the indexing member.

20. (original) The firearm mechanism of claim 19, wherein the surfaces are arranged on the ratchet to engage the indexing member such that at least one of the cartridge-receiving chambers may be stopped in alignment with a cartridge loading gate cutout in the supporting structure.

21. (original) The firearm mechanism of claim 18, wherein the cylinder indexing member is a pin having a substantially cylindrical shape.

22. (original) The firearm mechanism of claim 18, further comprising the indexing member being disposed at least partially in a recess in the supporting structure.

23. (original) The firearm mechanism of claim 22, further comprising a spring associated with the indexing member, the spring being disposed in the supporting structure recess and biasing the indexing member forward towards the cylinder.

24. (original) The firearm mechanism of claim 23, further comprising the recess having a step and the indexing member having a shoulder configured and adapted to engage the step such that the indexing member is prevented from being ejected from the recess by the spring.

25. (original) The firearm mechanism of claim 18, further comprising the pawl being located behind the cylinder and having a biasing member to bias the pawl towards the rear of the cylinder for engagement therewith;

wherein the pawl is movable from: (i) a first position in which the pawl is engageable with the cylinder to (ii) a second position in which the pawl is not engageable with the cylinder.

26. (original) The firearm mechanism of claim 25, further comprising the pawl having a projection extending outwardly therefrom to contact the supporting structure, the projection contacting the frame to hold the pawl in the second position.

27. (original) A firearm mechanism for creating having indexed movement of a revolver cylinder, the firearm mechanism comprising:

a frame;

a hammer pivotably mounted to the frame and movable into and out of engagement with the frame;

a cylinder rotatably carried by the frame and having a front and a rear, the cylinder comprising a plurality of cartridge-receiving chambers and defining a loading position with respect to the frame for each of the cylinders;

a ratchet disposed on the rear of the cylinder;

a pawl pivotably mounted to the hammer and engageable with the cylinder ratchet, at least a portion of the pawl capable of contacting the frame; and

a stop pin carried by the frame and engageable with the cylinder ratchet, the ratchet and stop pin being cooperatively adapted and configured such that the stop pin is capable of selectively engaging and stopping the rotation of the cylinder in a first direction at each of the loading positions when the hammer is engaged with the frame.

28. (original) The firearm mechanism of claim 27, wherein the ratchet is configured to permit the cylinder to be freely rotated in a second direction opposite the first direction.

29. (original) The firearm mechanism of claim 27, further comprising the pin being biased towards the cylinder ratchet by a biasing member.

30. (original) The firearm mechanism of claim 29, wherein the biasing member and at least part of the pin are disposed in a recess in the frame.

31. (original) The firearm mechanism of claim 27, wherein the pawl is moveable from:

(i) a first position in which the pawl is not in contact with the frame and engaged with the cylinder; to

(ii) a second position in which the pawl is in contact with the frame and does not engage the cylinder.

32. (original) The firearm mechanism of claim 31, wherein the pawl is mounted to the hammer such that the pawl moves upwards when moved from the second position to the first position.

33. (original) The firearm mechanism of claim 3, wherein the frame further comprises a cylinder frame for carrying the cylinder and a grip frame attachable to the cylinder frame, the pawl contacting the grip frame to hold the pawl in the second position.

34. (original) The firearm mechanism of claim 33, further comprising the pawl having a lobe projecting outwardly therefrom which contacts the frame.

35. (new) A solid-frame revolver comprising:
a barrel;
a frame connected to the barrel and having a loading gate cutout;
a cylinder rotatably carried by the frame and defining a plurality of cartridge-receiving chambers;
a ratchet disposed on the cylinder;
a hammer pivotally mounted to the frame and movable from an uncocked forward position engaged with the frame to a cocked rearward position disengaged from the frame;
a pawl operably connected to the hammer and engageable with the ratchet, the pawl movable from a first position in which the pawl is not engaged with the ratchet when the hammer is uncocked, to a second position in which the pawl engages the ratchet when the hammer is cocked; and
an indexing member biased into engagement with the ratchet and stopping rotation of the cylinder in a first direction when the hammer is uncocked to selectively locate each of the chambers in alignment with the loading gate cutout in the frame for loading or unloading cartridges, the indexing member allowing free rotation of the cylinder in a second direction when the hammer is uncocked.

36. (new) A revolver comprising:
a frame having a cartridge loading gate cutout;

a hammer pivotally mounted to the frame and movable from a forward position engaged with the frame to a rearward position disengaged from the frame;

a trigger pivotally mounted to the frame;

a cylinder rotatably carried by the frame and defining a plurality of chambers to receive cartridges, the cylinder freely rotatable in one direction with the hammer in the forward position engaged with the frame, the cylinder defining a loading position for each of the chambers with respect to the loading gate cutout in the frame;

a pawl selectively engageable with the cylinder and moveable from a first position engaging the cylinder to a second position disengaged from the cylinder; and

a means for indexing the cylinder in a second opposite rotational direction with the hammer in the forward position engaged with the frame to align a chamber in a loading position with the loading gate cutout in the frame.